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Amendment and Response

Applicant: Josef Böck et al.

Serial No.: 10/521,106

Filed: September 13, 2005

Docket No.: I435,121.101/12307US

Title: BIPOLAR TRANSISTOR

IN THE CLAIMS

Please cancel claims 10-11, 17-23 and 30-32.

Please amend claims 9 as follows:

1-8 (Cancelled)

9. (Currently Amended) A bipolar transistor comprising:
an emitter area which can be contacted electrically via an emitter electrode;
a base area which can be contacted electrically via a base electrode;
a collector area which can be contacted electrically via a collector electrode; and
wherein at least one electrode of the emitter electrode, base electrode and collector electrode is a polysilicon layer, into which doping is inserted and impurity atoms are inserted, wherein the inserting of the impurity atoms which causes a high density of vacancies in the polysilicon layer, the density in the range of about 10^{19} to 10^{21} cm⁻³, and wherein the impurity atoms are C, P or Ar atoms, are inserted.

10. (Cancelled)

11. (Cancelled)

12. (Previously Presented) The transistor of claim 9, comprising wherein the polysilicon layer is doped with boron atoms.

13. (Previously Presented) The transistor of claim 12, comprising wherein the concentration of the boron atoms is greater than 5×10^{20} cm⁻³.

14. (Previously Presented) The transistor of claim 9, comprising wherein the at least one electrode consists of polycrystalline silicon-germanium.

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15. (Previously Presented) The transistor of claim 9, comprising wherein the at least one electrode is the base electrode.

16. (Previously Presented) The transistor of claim 9, comprising wherein the bipolar transistor is a self-aligned bipolar transistor.

17.-23 (Cancelled)

24. (Previously Presented) A bipolar transistor comprising:
an emitter area which can be contacted electrically via an emitter electrode;
a base area which can be contacted electrically via a base electrode;
a collector area which can be contacted electrically via a collector electrode; and
wherein at least one electrode of the emitter electrode, base electrode and collector electrode is a polysilicon layer, into which impurity atoms, which cause a high density of vacancies in the polysilicon layer, are inserted, wherein the impurity atoms are C, P or Ar atoms, and wherein the density of the impurity atoms in the polysilicon layer is in the range of about 10^{19} to 10^{21} cm^{-3} .

25. (Previously Presented) The transistor of claim 24, comprising wherein the polysilicon layer is doped with boron atoms.

26. (Previously Presented) The transistor of claim 25, comprising wherein the concentration of the boron atoms is greater than $5 \times 10^{20} \text{ cm}^{-3}$.

27. (Previously Presented) The transistor of claim 26, comprising wherein the at least one electrode consists of polycrystalline silicon-germanium.

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28. (Previously Presented) The transistor of claim 27, comprising wherein the at least one electrode is the base electrode.

29. (Previously Presented) The transistor of claim 28, comprising wherein the bipolar transistor is a self-aligned bipolar transistor.

30.-32 (Cancelled)